

Attached hereto is a marked-up version of the amendments made to the claims. The attached page is captioned “**MARKED-UP CLAIMS**.”

Rejection of Claims 14-15, 25, and 26 under 35 U.S.C. §112, second paragraph

Claims 14-15, 25 and 26 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite because “the A/B ratio” does not have antecedent basis and is not defined in the claims.

Applicants have amended claim 25 to provide proper antecedent basis for the term “A/B ratio” in claims 25 and 26. The amendments to claims 1 and 15 provide proper antecedent basis for the term “A/B ratio” in claim 15. Applicants have cancelled claim 14, thus, obviating its rejection.

Further, the term “A/B ratio” is defined in the specification as the ratio of divalent metals (e.g., Ba) to tetravalent metals (e.g., Ti) in the composition and, thus, Applicants submit that the term is not indefinite. (See, for example, page 9, lines 14-16).

Accordingly, Applicants respectfully request withdrawal of the rejection of claims 14-15, 25 and 26 under 35 U.S.C. §112, second paragraph.

Rejection of Claims 1, 3-5, 8-21, and 23-30 under 35 U.S.C. §102(e)/§103(a)  
over U.S. Patent No. 6,169,049

Claims 1, 3-5, 8-21, and 23-30 were rejected under 35 U.S.C. §102(e) as being anticipated by or, in the alternative, under 35 U.S.C. §103(a) as obvious over U.S. Patent No. 6,169,049 (Witham et al.).

Witham does not teach or suggest a method for heat treating a barium titanate-based particulate composition including the step of adjusting the A/B ratio of the heat-treated particulate composition, as recited in amended claim 1. Because Witham fails to anticipate or make obvious the recited method, independent claim 1 is patentable over Witham. Claims 4-5, and 8-18 depend from claim 1 and are patentable for at least this reason. Claim 3 has been cancelled.

Further, Witham does not teach or suggest a method for heat treating a barium titanate-based particulate composition wherein the heat-treated particulate composition has an average particle size of at least 50% greater than an average particle size of the barium titanate-based

particulate composition, as recited in amended claim 19. Because Witham fails to anticipate or make obvious the recited method, independent claim 19 is patentable over Witham. Claims 20, 21, and 24-30 depend from claim 19 are also patentable over Witham for at least this reason. Claim 23 has been cancelled.

Accordingly, Applicants respectfully request withdrawal of the rejection of claims 1, 3-5, 8-21, and 23-30 under 35 U.S.C. §102(e) or, in the alternative, under 35 U.S.C. §103(a) over Witham.

Rejection of Claims 1-12, 19-23, and 30 under 35 U.S.C. §102(b)/§103(a) over U.S. Patent No. 4,929,574 (Iltis)

Claims 1-12, 19-23, and 30 were rejected under 35 U.S.C. §102(b) as being anticipated by or, in the alternative, under 35 U.S.C. §103(a) as obvious over U.S. Patent No. 4,929,574 (Iltis).

Iltis does not teach or suggest a method for heat treating a barium titanate-based particulate composition that includes the step recited in independent claims 1 and 19 of hydrothermally-producing the barium titanate-based particulate composition. Further, Iltis does not teach or suggest a method for heat treating a barium titanate-based particulate composition that includes the step recited in independent claim 1 of adjusting the A/B ratio of the heat-treated particulate composition.

Because Iltis fails to anticipate or make obvious the recited methods, claims 1 and 19 are patentable over Iltis. Claims 2 and 4-12 depend from claim 1 and are patentable for at least this reason. Claims 20-22 and 30 depend from claim 19 and are patentable for at least this reason. Claims 3 and 23 have been cancelled.

Accordingly, Applicants respectfully request withdrawal of the rejection of claims 1-12, 19-23, and 30 under 35 U.S.C. §102(b) or, in the alternative, under 35 U.S.C. §103(a) over Iltis.

Rejection of Claims 1-30 under 35 U.S.C. §103(a) over U.S. Patent No. 5,155,072 with "High-Performance Multilayer Capacitor Dielectrics from Chemically Prepared Powders"

Claims 1-30 were rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,155,072 (Bruno patent) in combination with "High-Performance Multilayer Capacitor Dielectrics from Chemically Prepared Powder" (Bruno article).

The proposed combination of the Bruno patent and the Bruno article fails to teach or suggest a method for heat treating a barium titanate-based particulate composition including the step of hydrothermally-producing the barium titanate-based particle composition, as recited in independent claims 1 and 19. Furthermore, the proposed combination fails to teach or suggest a method for heat treating a barium titanate-based particulate composition including the recitation in independent claim 19 of forming a heat-treated particulate composition having an average particle size of at least 50% greater than an average particle size of the barium titanate-based particulate composition.

Because the proposed combination of the Bruno patent and the Bruno article fails to provide each limitation of the recited methods, independent claims 1 and 19 are patentable over the proposed combination. Claims 2, 4-13, and 15-18 depend from claim 1 and are patentable for at least this reason. Claims 20-22 and 24-30 depend from claim 19 and are patentable for at least this reason. Claims 3, 14 and 23 have been cancelled.

Accordingly, Applicants respectfully request withdrawal of the rejection of claims 1-30 under 35 U.S.C. §103(a) as being unpatentable over the proposed combination of the Bruno patent and the Bruno article.

#### Newly Added Claims

Newly added claims 31 and 32 depend from claim 1 and are patentable for at least the above-described reasons that claim 1 is patentable.

The cited references fail to teach or suggest the method for heat treating a barium titanate-based particulate composition recited in newly added independent claim 33 that comprises hydrothermally producing a barium titanate based particulate composition, and heating the barium titanate-based particulate composition at a temperature between about 900°C and about 1100°C to form a heat-treated particulate composition. Therefore, claim 33 is patentable over the cited references. Newly added claims 34-46 depend from claim 33 and are patentable for at least this reason.

The cited references fail to teach or suggest the method recited in newly added independent claim 46 for heat treating a barium titanate-based particulate composition that comprises heating a barium titanate-based particulate composition at a temperature between about 700 °C and about 1150 °C to form a heat-treated particulate composition, the heat-treated

particulate composition having an average particle size of at least 50% greater than an average particle size of the barium titanate-based particulate composition, the heat-treated particulate composition having an A/B ratio; and, adjusting the A/B ratio of the heat-treated particulate composition. Therefore, claim 46 is patentable over the cited references. Newly added dependent claims 47-56 depend from claim 46 and are patentable for at least this reason.

### CONCLUSION

In view of the foregoing amendments and remarks, this application should now be in condition for allowance. A notice to this effect is respectfully requested. If the Examiner believes, after this amendment, that the application is not in condition for allowance, the Examiner is requested to call the undersigned at the number listed below.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicants hereby request any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, that is not covered by an enclosed check, please charge the deficiency to Deposit Account No. 23/2825.

Respectfully submitted,  
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### MARKED-UP CLAIMS

Claims 1, 13, 15, 19, and 25 have been amended as follows:

1. (Amended) A method for heat treating a barium titanate-based particulate composition comprising:

hydrothermally-producing a barium titanate-based particulate composition;

heating [a] the barium titanate-based particulate composition at a temperature between about 700 °C and about 1150 °C to form a heat-treated particulate composition, wherein the heat-treated particulate composition has an A/B ratio; and

adjusting the A/B ratio of the heat-treated particulate composition.

13. (Amended) The method of claim 1, further comprising depositing at least one dopant coating layer on surfaces of particles of the [barium titanate-based] heat-treated composition.

15. (Amended) The method of claim [14]1, comprising adjusting the A/B ratio of the heat-treated composition by depositing a coating comprising a barium compound on surfaces of particles of the heat-treated composition.

19. (Amended) A method for heat treating a barium titanate-based particulate composition comprising:

hydrothermally-producing a barium titanate-based particulate composition; and

heating a barium titanate-based particulate composition at a temperature and for a time sufficient to cause particle growth and insufficient to cause particle sintering thereby forming a heat-treated particulate composition having an average particle size of at least 50% greater than an average particle size of the barium titanate-based particulate composition.

25. (Amended) The method of claim 19, wherein the heat-treated composition has an A/B ratio and further comprising adjusting the A/B ratio of the heat-treated composition.